

Claims

1. An electrical machine, having a stator (1) which is received in a housing that is closed by a housing cap, and having a rotor (7) that includes a shaft (5) which is rotatably received in roller bearings (4),
5 characterized in that the roller bearings (4) are received by bearing rings (2), which are supported in the stator (1) of the electrical machine.

2. The electrical machine according to claim 1, characterized in that the stator (1) is provided on its face ends with openings (20, 28, 29) for receiving the bearing rings (2).

10 3. The electrical machine according to claim 1, characterized in that the bearing rings (2) are made from a nonmagnetic material.

4. The electrical machine according to claim 1, characterized in that bearing insulations (14) are located between the roller bearings (4) and a short-circuit ring (8.1) of the rotor (7).

15 5. The electrical machine according to claim 4, characterized in that the bearing insulation (14) is embodied as an expansion ring and is located in the region of an inner ring (24) of the roller bearing (4).

6. The electrical machine according to claim 1, characterized in that the roller bearings (4) have inner rings (24) which have nonelectrically conductive running faces for roller bodies (23).

7. The electrical machine according to claim 1, characterized in that a short-circuit ring (8.1), acting as a bearing seat (31), is press-fitted into the inner ring (24) of the roller bearing (4).

8. A method for assembly of an electrical machine of claim 1, characterized in that the countersunk features (20, 28, 29) on the stator (1) are embodied when the winding lamination packets are created in the stator (1), during the stamping process, in the face ends of the stator (1).

9. The method according to claim 8, characterized in that roller bearings (4) are joined to the bearing rings (2) before the bearing rings (2) are press-fitted into the countersunk features (20, 28, 29) on the face ends of the stator (1).

10. The method according to claim 8, characterized in that upon fitting of the rotor (7) into the stator (1), a short-circuit ring (8.1) is press-fitted as a bearing seat into the inner ring (24) of the roller bearing (4).

11. The method according to claim 8, characterized in that an

expansion ring (30) is injection molded in the region of the inner ring (24) of the roller bearing (4).